
VICTORIAN ENTOMOLOGIST

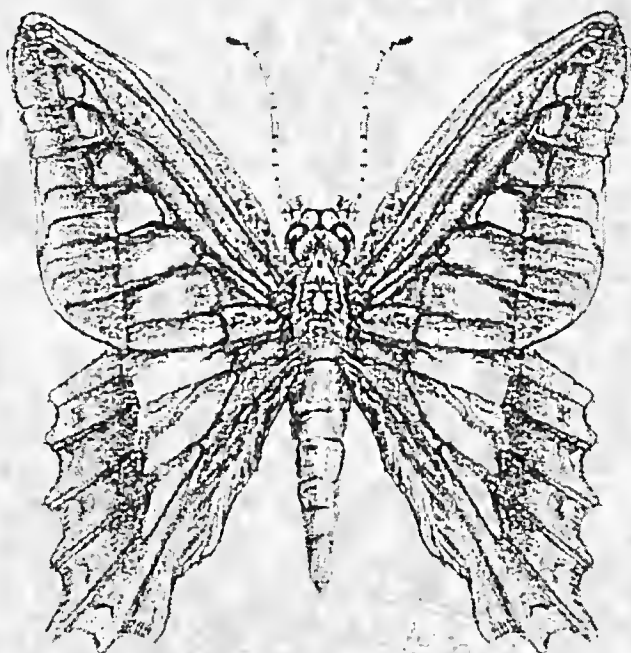


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News Bulletin of The Entomological Society of Victoria Inc.

THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)

MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at La Trobe University, 2nd Floor, Room 2.29, 215 Franklin Street, Melbourne (Opposite the Queen Victoria Market) Melway reference Map 2F B1 at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member	\$20.00 (overseas members \$22)
Country Member	\$16.00 (Over 100 km from GPO Melbourne)
Student Member	\$12.00
Associate Member	\$ 5.00 (No News Bulletin)
Institutional Member	\$25.00

Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

Cover design by Alan Hyman.

Cover illustration of the Blue Triangle butterfly, *Graphium sarpedon* L. by Rhonda Millen.

MINUTES OF THE ANNUAL GENERAL MEETING, 20 APRIL 2001

The Meeting was opened by the Treasurer at 8.23 pm.

Present: P. Carwardine, D. Dobrosak, I. Endersby, A. Glaister, A. Kellehear, R. McMahon, R. MacPherson, D. Stewart, G. Weeks,

Visitors: M. Endersby, J. Fook, Kirin Yee.

Apologies: A. Farnworth, E. Farnworth, C. Peterson, J. Tinetti.

Minutes: Minutes of the Annual general meeting 14 April 2000 [*Vic. Ent.* 30: (3): 33] were accepted. *M: R. MacPherson; S: D. Stewart*

Treasurer's Report:

- The Treasurer reported that the financial status of the Society remained similar to that of the previous year with the only significant change to the society's finances being the costs associated with the nomination for the Sword Grass Brown project to the Conservation award.
- The Society's 2001 accounts were accepted. *M. I. Endersby, S. P. Carwardine.*

Editor's Report:

- The editor thanked all contributors and Susan Dobrosak who arranges the mailout of the *Victorian Entomologist*.

Committee Reports:

- Neither the ENTRECS or Conservation Committees were active during the year. No nominations were received for the Le Souëf Award in 2000.

Nomination for Council Positions:

As no written nominations had been received the Public Officer announced that the current office bearers had agreed to continue in their positions, and thanked Ray MacPherson for his contributions during his time on Council.

President: A. Kellehear
Immediate Past President: P. Carwardine
Vice President: vacant
Secretary: J. Tinetti

Treasurer: I. Endersby
Editor: D. Dobrosak
Public Officer: I. Endersby
Councillor: D. Stewart.

Committee Members:

Members were invited to join the ENTRECS and Conservation Committees.

The meeting was closed at 8.38 pm

MINUTES OF THE GENERAL MEETING, 20 APRIL 2001

The Meeting was opened by the Treasurer at 8.38 pm.

Present: P. Carwardine, D. Dobrosak, I. Endersby, A. Glaister, A. Kellehear, R. McMahon, R. MacPherson, D. Stewart, G. Weeks,

Visitors: M. Endersby, J. Fook, Kirin Yee.

Apologies: A. Farnworth, E. Farnworth, C. Peterson, J Tinetti.

Minutes: Minutes of the Annual general meeting 8 December 2000 [*Vic. Ent.* 30: (1): 1] were accepted. *M: P. Carwardine; S: I. Endersby*

Correspondence: Items received and tabled:

- Circular No 88, 89 and 90 of The Society for Insect Studies
- Journal of the Entomological Research Society from Turkey on exchange
- An update of listed taxa Correspondence from the Department of Natural Resources and Environment relating to current nominations under the *Flora and Fauna Guarantee Act*. Of interest to our readers were the nominations for listing of an undescribed ant.

Treasurer's Report:

- Account balances are: General account \$5707; Le Souëf account \$3429. The treasurer noted that 34 out of 100 members were still unfinancial. The treasurer moved that \$60 be allocated to the Science Talent Search awards. *M: I. Endersby S. P. Carwardine.*

General Business:

1. There was discussion about a proposal to move the meeting venue to the Melbourne Camera Club at South Melbourne (near the corner of Dorcas and Ferris Streets as well as the desirability of moving the meeting day from Friday to Thursday or Wednesday. This matter will be discussed further at forthcoming meetings.
2. Applications for membership were received from David Lohman. Peter Ockenden, Timothy Ockenden, Lindi Garnett and Kirin Lee.
3. Members and Councillors were reminded that Council will meet on the 2nd Thursday of each odd month (with the exception of January when no meeting will be held).

Exhibits:

- Ray MacPherson displayed various insects collected from his swimming pool at Templestowe, Vic. Ray also brought some books of entomological interest titled: "Edward Wilson – Naturalist" and "The Earth Dwellers". Daniel Dobrosak brought some aquatic nymphs of odonata and ephemeroptera collected from a farm dam at Taradale Victoria.

Speaker:

Allan Kellehear presented a fascinating and comprehensive series of slides of insects of the Geelong area.

The Treasurer thanked the speaker on behalf of the group

The meeting was closed at 10.08 pm

ERRATUM

Butterflies from the Rock Nature Reserve NSW by G. Wurtz, *Vic. Ent.* 31(2) 24-25

Page 24 included a reference to the number of species recorded from Wagga Wagga, N.S.W. The correct number of species is 26 not 226.

Obituary - Joy Burns. 1930 - 2001

D.R. & J.M. Holmes
33 Fig Street, Dromana Vic 3936

Joy Burns was born Agnes Joy Hamilton, on March 6th 1930, in the Northern Suburbs of Melbourne. She and Gordon were married after Gordon returned from active service in the A.I.F.. They had 3 children, Gary, Colin and Barbara. Joy managed the Milk Bar they had purchased, in Mornington, while Gordon was assistant manager at Safeway. Joy had always been interested in photography, so when they sold the Milk Bar and Gordon retired from Safeway, they traversed many thousands of miles over Australia with Gordon collecting, and Joy photographing the precious Jewel Beetles. Gordon died in 1990 and Colin soon after.

Joy continued to travel to the Museum quite often, and spent many hours working to complete the database for Entrecs, for the distribution of insects – in this case Jewel Beetles. She continued this work, until failing health meant that she had to live with her daughter, Barbara. About three years ago she was moved to a nursing home in Tasmania which was very close to Gary's home and from where she passed away on April 28th 2001.

Vale Joy

Reference

Holmes D. & J. Obituary – Gordon Burns. *Vic Ent.* 21(1):31-34

MINUTES OF THE COUNCIL MEETING, 17 MAY 2001

The Meeting was opened by the President at 8.08 pm.

Present: P. Carwardine, D. Dobrosak, I. Endersby, A. Kellehear, D. Stewart.

Apologies: J. Tinetti.

Minutes: Minutes of the previous Council meeting [*Vic. Ent.* 31: (2): 17] were accepted. *M: A. Kellehear; S: I. Endersby*

Correspondence: Items received and tabled:

- Letter from the Department of Natural Resources and Environment advising that the Society's Research Permit under the Flora and Fauna Guarantee Act 1988 and National Parks Act 1975 will be renewed.
- Journal of the Entomological Research Society 2(3) on exchange.

Treasurer's Report: Account balances are: General account \$6164; Le Souëf account \$3477. The Treasurer reported that 32 members were still un-financial and a reminder note would be sent out with the next issue of *Victorian Entomologist*.

Editor's Report: The Editor reported that sufficient papers had been received for the June issue of *Victorian Entomologist*.

General Business:

Accommodation: Negotiations are continuing with the Camera Club regarding a possible change of venue for general meetings.

Council Member: Council is pleased to report that Dr. Ken Walker has agreed to accept a secondment to Council.

The meeting was closed at 8.38 pm

William Heron: A Neglected Contributor to Entomology

C. E. Chadwick

9-2 Francis Road, Artamon, N.S.W. 2064

Abstract

No positive data have been found on the birthplace and early life of William Heron, but his early years were apparently spent in Tasmania, from which he moved to the south coast of New South Wales. From about 1914 until his death in 1952 he resided in various localities in the Dorrigo area. His most notable achievement was to supply new species of insect to contemporary insect taxonomists for description, notably Tipulidae to C.P. Alexander, and various Coleoptera to A.M. Lea. H.J. Carter and E.H. Zeck were minor benefactors from his collecting. In later years other taxonomists described insects which he collected. At present his material is mainly in the United States National Museum (Family Tipulidae), the South Australian Museum (Coleoptera) and the Australian Museum (Coleoptera and Arachnida).

Very little information has been found on the early life of William Heron. Official records in NSW indicate that he died in the Bellingen District Hospital on 4th July 1952 at the age of 87 and that he was born in Hobart. Extended enquiries in Hobart have given no confirmation to the latter statement e.g. a communication from the Archives of Tasmania states: "I have again checked for a record of William Heron's birth between 1857 and 1877 in Hobart and between 1863 and 1867 in the remainder of Tasmania, but I have not been able to trace any reference to his birth" (M. McRae, pers. comm.). Other Tasmanian data referring to people named Heron do not relate to this man. A search through the Royal Australian Historical Society's index of births in Australia prior to 1900 has not given any data relating to him.

The only known clue to his early association with Tasmania occurs in a letter Heron wrote to C.P. Alexander under date 9/11/1926. He mentioned being in certain areas in north western Tasmania (e.g. Burnie, Strahan, Macquarie Harbour etc.) in the late 1880s, which he visited by land from Burnie in the north, by sea from Hobart.

In the same letter he mentions being near Bodalla, NSW many years later. A specimen in the Australian Museum of the weevil *Belus bidentatus* Don. labelled: "Conjola, 25/10/10, W. Heron" probably refers to the same man and a similar time.

The date of Heron's arrival in the Dorrigo area is not known for certain. Carter (1933: 85-89) wrote of a trip with T.G. Sloane to the Dorrigo district in July 1910 and stated (p.89): "W. Heron has since supplied the Museum (?Australian or ?South Australian) as well as myself with a large number of miscellaneous species, and in a brief survey I find at least seventeen weevils described by A.M. Lea from this region." (This does not necessarily mean that Heron was in the district in 1910; actually he appears to have been on the far South Coast at the time: the insects could have been collected in subsequent years or by other collectors). Sloane (1911) did not mention Heron in his paper on the Carabidae of the Dorrigo: neither did Carter (1911) in his paper on the Tenebrionidae. However Carter (1914) mentioned Heron as a collector of the tenebrionid *Menephilus rectibasis* from Dorrigo. Lea in a paper published in 1914 gave Heron as a collector and Dorrigo as the locality for three beetles, *Eucarteria floralis*, *Cyllorhamphus mimicus* and *Mandalotus transversus*. W. Lawrence (pers. comm.) stated that W. Heron resided at Brooklana in November 1914. Thus Heron would have been established in the district in 1914, if not earlier.

In the earlier years of this century the Dorrigo district was very different from its present condition. It was heavily timbered and much more sparsely populated. Timber getting was the main industry. Heron (letter to Alexander, 25/4/27: 3) described the area as "a mass of undulating scrubby country, very thickly timbered with *Araucaria cunninghami* (hoop pine), few hardwoods, tallow and blue and red gum, and softwoods and undergrowth.

Poor place though for showy botanical specimens as barren coast affords, where everything has a flower."

Information from correspondents, from locality labels and from the Australian Museum insect accession register indicates that he lived in several places on the Dorrigo plateau. He was well known at Brooklana in November 1914 (W. Lawrence, pers. comm.). Apparently he lived at Ulong in 1919-1924, and at Brooklana 1927-30 in a small slab hut. About October 1930 he moved to a spot three kilometres from Dorrigo township, where he spent the rest of his life in a long, rectangular iron shed about 100 metres from the old Coramba road, which later was the site of the local garbage dump. At one time he lived at Lowanna (Key, pers. comm.) and probably lived at Briggsdale while he was employed at the sawmill, but no precise data are available. As a single man without dependents his housing needs were simple. When he first moved to the Dorrigo district he lived in a barn (M. Thomas, pers. comm.), and later in a galvanised iron hut. At one time he obtained his groceries by courtesy of the mailman (Key, pers. comm.). In a letter to Alexander dated 3/9/21 Heron wrote: "I have been 10 years rambling about and am now permanent on Eastern Dorrigo."

Apparently Heron was always employed as a manual worker, e.g. at one time he worked on local roads, at another he was an employee at Briggsdale sawmill.

In his later years William Heron was in poor health (Key, pers. comm.). Late in June or early in July 1952 he became seriously ill. As the hospital at Dorrigo had been temporarily closed he was taken to the Bellingen District Hospital where his death occurred on 4 July. He was buried in an unmarked grave (C. Hampton, pers. comm.).

Heron was an unusual man, a fact accentuated by being a scholar in a rural community and something of a novelty by living alone and having interests wholly differing from those of local people. His capacity for total absorption in his biological interests would have been unique in the area. However he was highly regarded by many of the people of the district, some of whom still remember him kindly and have supplied information about him.

Physically, he was a thin, spare man of medium height. His manner was quiet and reserved (C. Hampton, pers. comm.).

Another correspondent who knew Heron in the last two years of his life referred to him as a "very kindly aged gentleman" and others who knew him regarded him with considerable respect. "He always wore an old 'cabbage tree' hat and an old dark tweed overcoat and rubber kncc boots. Around his coat he would wear an Army leather belt. He always wore a beard (dark with a little grey through it) and he had the most piercing brown eyes I have ever seen. After he spoke he almost 'looked through me as he waited for an answer' " (Key, pers. comm.).

"Obviously erudite, he referred to flora and fauna by their Latin names. Whatever the weather, William Heron would be seen tramping along bush tracks miles from his camp, a butterfly net over one shoulder, and often reading a book as he walked, sidestepping, it seemed by instinct, the numerous puddles." (C. Hampton, pers. comm.)

At times he was seen "walking, using his umbrella as a sunshade, carrying his butterfly net under an arm, and reading a book...the reason for carrying an umbrella at all times was to place it inverted under a bush, then shake the bush, causing the non-flying insects to fall into the umbrella". (W. Lawrence, pers. comm.)

On one occasion when he was observed using a wheelbarrow to move soil he placed a book on the top of the load to study as he worked.

His recorded entomological activities began about 1914. In that year he helped G.A. Waterhouse in his studies on the satyrid butterfly *Tisiphone abeona* (Waterhouse 1914, 1915, 1928). He collected *T.a. joanna* in the area between Coffs Harbour and Clarence River Heads (Waterhouse 1915, 1922). In November 1914 he obtained some specimens of *T. abeona morrisi* and *T. a. regalis* from East Dorrigo (Waterhouse 1928).

In April 1917 Heron found a female crane fly at Ulong and sent it to Dr. R.J. Tillyard, a noted entomologist of the era. Tillyard forwarded the specimen to Dr. C.P. Alexander, an American, then regarded as the world authority on the group: he was Curator of the Illinois State Natural History Survey Collections at Urbana, Illinois at the time (1919-1922). Alexander described the insect as *Clytosmus tillyardi* (Alexander 1920). Subsequently Alexander (1932) published observations Wm. Heron had made on the species.

Heron and Alexander entered into direct correspondence subsequent to the discovery of *C. tillyardi*. Alexander (1932) began a study of Australian Tipulidae in 1919, and was obviously greatly helped by Heron as his publications record. Alexander added many of Heron's specimens to his own very extensive personal collection. This collection and Alexander's correspondence were purchased by the United States Museum of Natural History, Washington D.C. and removed from Amherst just before Alexander's death late in 1981 (Peters, pers. comm.).

An American, J.R. Malloch (1929), described two tachinid flies from specimens supplied to the Australian Museum by Heron.

In 1931 a party of American scientists from Harvard University came to Australia to study Australian animals. It was headed by Prof. W.M. Wheeler, then the world authority on ants. Heron unsuccessfully tried to persuade Wheeler to visit Dorriggo, but he did have a visit, early in March 1932, from Dr. P.J. Darlington, an assiduous collector, who operated at Briggsdale, Beilsdowne and Mt. Campion and found Heron to be very helpful (Darlington pers. comm.). Darlington, a specialist on carab beetles, discovered some new species of insect.

Heron collected beetles for H.J. Carter and E.H. Zeck, who described several new species from the material (Carter & Zeck 1929, 1932, 1937). Carter died in 1940, Zeck in 1963.

Heron also collected beetles for A.M. Lea of the South Australian Museum, probably including at least some of the 17 species of weevil mentioned by Carter (1933). Many beetles in the Australian Museum collection bear labels indicating that Heron collected them at Dorriggo, East Dorriggo, Ulong and Brooklana. (Both the literature and specimens show that sometimes Heron used the term East Dorriggo, as well as Ulong or Brooklana for the same specimen). There is a paucity of beetle records between 1914 and 1923. Dates of collecting beetles range from February 1923 to 17 July 1932 from the writer's records, derived from the literature, but A.M. Lea's death in February 1932 probably removed much of the stimulus to collect beetles, as his successor, H. Womersley did not study beetles. However a letter from Heron to Alexander late in 1950 indicated that he had been sending material away at about that time. No records have been found of entomological activities over the period of about 18 years, but the lack of written records does not necessarily prove lack of activity.

Heron's collecting gained him recognition from those he helped. Referring to *Tisiphone abeona joanna* Waterhouse (1922) stated: "In the spring of 1914.... I received a large number of specimens from between Clarence Heads and Coffs Harbour from Mr. F.A. Heron" (sic). Alexander (1928) referring to the crane fly *Gynoplistia remulosa* Alex. wrote: "The fly was included in collections of crane flies sent to me by Mr. William Heron and was taken on the Dorriggo Plateau where the collector has made so many discoveries of unusual insects. I am greatly indebted to Mr. Heron for his kind interest in collecting specimens of Tipulidae and related groups." Again (Alexander 1932) referring to help from collectors stated: "The most extensive of these collections, including in each case in excess of 100 specimens, are those of....Mr. Heron."

Alexander (1934) referred to: "A smaller number from the Dorriggo of northern NSW were taken by Mr. William Heron, who has collected numerous Tipulidae in this very interesting region. These specimens are retained in my own collection...." (No doubt they are now in the possession of the United States Museum of Natural History, C.E.C.)

Heron seems to have been generous with his specimens and his time. Existing records indicate that he first collected butterflies for G.A. Waterhouse in the Coffs Harbour-Clarence Heads area in 1914 (Waterhouse 1915) and beetles e.g. *Cyllorhamphus mimicus*, *Eucarteria floralis* and *Mandalotus transversus* for A.M. Lea at Dorrigo (Lea 1914). Carter (1914) described *Menephilus rectibasis* collected by Heron from Dorrigo. Obviously the specimens would have been collected before being described, which indicates the date of Heron's residence in the district.

His first crane fly (*Clytocosmus tillyardi*) was taken in April 1917 (Alexander 1920) and the supply of arthropod material to institutions and individuals was his main biological project for many years.

The insect collection register of the Australian Museum indicates that many specimens were received at the Museum from Heron. On 8th February 1919 he donated five specimens from Dorrigo, on 11 April 11 specimens from Ulong and on 9 September another 20 insects from the same locality. In July 1929 the museum purchased about 310 insects and about 158 spiders including two paratypes of *Australothele nambucca* from Brooklana. In February 1930 another 38 insect specimens, also from Brooklana, were donated. Additional records of material from Dorrigo were entered in the register on 2/2/1932 (14 specimens), 28/10/32 (8) and 20/6/33 (6). After 14 April 1936 the register listed only type material, so that the full extent of his contribution is in all probability not recorded. However later type material was received from Heron. K.C. McKeown (assistant entomologist) described four Cerambycidae (three holotypes, one paratype) from Heron specimens.

A.M. Lea and later E.C. Matthews and others described some of the insects Heron sent to the South Australian Museum. In addition he supplied Elmidae (Helminthidae or "Dryopidae") and Buprestidae to Carter and Zeck (e.g. *Cisseis heroni*) in Sydney.

He also sent insects to G.C. Crampton at the Museum of Comparative Zoology, Harvard, Mass., e.g. Rehn (1932 : 136) described *Tetrix dorrigoensis* (holotype) from a Heron specimen. Britton (1957) mentioned a number of melolonthids from the same museum, collected by Heron.

It is evident that Heron had contact with most of the Australian collectors and taxonomists of that period e.g. Carter, Zeck, Robinson, G.A. Waterhouse, Tillyard, O.B. Lower in NSW, Rayment and Wilson in Victoria, Lea in South Australia, also with Alexander and Crampton in USA. (Alexander alone seems to have preserved his correspondence).

It would be impracticable to locate all the material collected by this man. Although he collected material for over 200 new species of arthropod from the Dorrigo district it is quite probable that unnamed Heron material remains to be described, for example Matthews (1972-76), Lambkin (1978), Brown (1983) and Zimmerman (1994) included Heron material in their studies. Very likely there are other undescribed specimens in collections. The most recently collected specimen noted in the literature examined by the writer is *Cicadella heroni*, a synonym of *Kolla albomarginata* (Sign.), collected at East Dorrigo on 12/4/1938 (Evans 1938, 1966), but he seems to have collected insects much later.

There is every indication that Heron was very devoted to his intellectual interests, with money a very minor consideration. He did have interests beside those of a biological nature, but only very inadequate indications of these still survive. He derived his pleasures from nature, especially from insects. Information from his contemporaries indicates that he gained the greatest delight when species were named after him. His life must have been lonely with little or no personal contact with people having similar interests. However he was one of the major non-publishing Australian amateurs of the 20th. century, comparable with Horace Brown, Francis du Boulay and Vic Robinson. It would be unreasonable for his contribution, in spite of obvious difficulties, to be left unrecorded.

THE ALEXANDER-HERON CORRESPONDENCE

Correspondence between Alexander and Heron, now in the Smithsonian Institution, Washington D.C., consists of 30 letters (15 by each writer), commencing with Alexander's initial letter of 30/8/1921 and ending with his last letter of 23/3/1951. A letter to G.C. Crampton is also included. I am much obliged to Mr. Wm. Cox for photocopies of these letters.

Alexander's first communication, from Amherst, was triggered by knowledge that Heron had sent tipulid material to Tillyard and to the South Australian Museum. He was naming a new species in that museum *Habromastix heroni* and would pay Heron to collect for him.

In reply Heron agreed to assist and as payment asked for "a strong light collapsible cane net - one I could stow away from observation by the hooligan public." In November 1921 Alexander sent a collapsible net, additional equipment and instructions on his requirements, plus collecting hints. Next year, in February, Heron sent a consignment of flies collected from December to February, mentioning that the tipulid *Platyphasia regina* was common.

Heron's subsequent letters contained data on the weather, the topography, the climate, a map of the area, habits and abundance of tipulid species collected.

In September 1922 he asked Alexander for American political literature as he was studying evolutionary politics and already received the weekly *Westminster Gazette* from London. He believed "that the power over things" was passing from the church to science. He recommended V.J. Robinson, of Rous, as a collector. (Later Robinson provided some new crane flies e.g. *Habromastix robinsoni* Alex.).

In March 1926, after a lapse in correspondence due to health and other problems, Alexander wrote offering Heron "a pound (\$5) for each 100 specimens not exceeding 10 of a kind." He was especially interested in small species. In that year Alexander had a visit from Tillyard and his wife, who reported favourably on Heron. He started sending Heron copies of the American journal *Literary Gazette*.

In November 1926 Heron wrote describing his adventures on the west coast of Tasmania "in the late 80s of last century" indicating clearly enough an early association with that State. Although he heard stories of the thylacine he did not have any personal experience of it. His first experience alone with luminous fungi in a lonely area was quite terrifying.

On 25/4/1927 he wrote of sending a manuscript to a newspaper in Canberra. It dealt with "Ideals", ranging from virtual absence in savagery to the present when he considered that three political ideals needed to be considered viz., Revolution, Guild-Socialism and Science. He also recorded having received money as a result of sales to G.C. Crampton, a comparative morphologist at the Museum of Comparative Zoology, Harvard. Specimens sent to Alexander at this time included a new crane fly *Molophilus heroni*.

Correspondence continued during 1928, 1929 and 1930 with Heron sending specimens to Alexander and to Crampton who was interested in stone flies, mayflies, scorpion flies, roaches and other insects.

Alexander's letter of 23/9/30 indicated his shortage of funds (no doubt due to the depression), but Crampton was better off.

A letter from Heron to Crampton dated 6/3/34 stated that he was sending Crampton some material: he had specimens for Alexander, but had lost contact with him. Heron had completed and was rewriting a book covering the period from Aristotle to 1934; no details of the contents were mentioned.

Effective correspondence between Alexander and Heron seems to have terminated late in 1930 (about the time of Heron's move closer to Dorriggo township.) On 18 December Alexander acknowledged a consignment of Tipulidae, but not in the usual good condition. He urged Heron to continue his collecting, both for himself and for Crampton who had not so

far been affected by the depression which had hit so many others. Apparently communication ceased about that time.

On 27 September 1950 Alexander wrote to the Postmaster at Brooklana seeking to re-establish contact with Heron. Heron's reply (16/10/50) indicated that he had sent material to Crampton at Amherst, to Harvard, Mass. and to the British Museum (how recently is not clear). However he seemed to be more concerned with less entomological matters such as his ten acre leasehold and garden, meteorological conditions, and the fact that "Naturalists were also ridiculed by the simple people. Even slandered", and the fact that "Each patron expects me to give the whole of my time to his speciality. It can't be done." (Heron would have been about 85 years of age and in poor health at the time).

Alexander's reply (23/3/51) urged Heron to continue to collect, and sent him a consignment of suitable envelopes for that purpose. This was probably the end of the correspondence, as no later letters are on record (Heron died on 4th July 1952).

OTHER COLLECTORS OF DORRIGO ARTHROPODS

William Heron was not the first person to collect arthropods in the Dorriggo area, but he was the first resident naturalist in the district and possibly, in his time, contributed more to the knowledge of the natural history of the Dorriggo district than all other collectors combined. He also acted as a reference point and provider of specimens for other people interested in natural history.

H.J. Carter (1933: 85) mentions a trip to the district by himself and T.G. Sloane in July 1910. J.H. Maiden, a noted botanist, collected in the area at an even earlier, but unrecorded, date (Carter 1933: 89).

In November-December 1911 R.J. Tillyard visited the district to collect insects (Carter: 1912: 503, 1933: 89).

Carter (1932: 110) mentioned Alfred E. Stephen and S.W. Jackson (1924) without giving exact dates. A.M. Lea in his various papers included as collectors of beetles from the district H.J. Carter, H.W. Cox, E.W. Ferguson and R.J. Tillyard, but did not give dates.

The Australian Museum accession register records on 6 May 1930 a gift of eight insects from F. Sullivan collected at Cascade.

J.R. Darlington, an American specialist in Carabidae, collected at Briggsvalc, Beilsdowne and Mt. Campion in March 1932.

B.L. Brunet visited the Dorriggo briefly in January 1963, September 1966 and December 1975. He found Carabidae to be abundant, Curculionidae were common, some Scarabaeidae flew to light and Pieridae were observed.

D.H. Colless collected the unique female holotype of the fly *Trupanea bifida* from 58 km. Dorriggo-Coramba Road on 17/4/1970.

C.E. Chadwick was in the district in April 1971 and again in March-April 1972 to collect insects, especially weevils, and to visit the areas where Heron had collected in the past.

Barbara Main, of Western Australia, collected a specimen of "the tube spider," *Dyarcopsis robertsi*, in Dorriggo State Forest, on 21 November 1972 and mentioned it in the description of the new species.

Label data on insects collected by Dallas Doolan and donated to the Australian Museum indicate that he collected in the Dorriggo district in the odd years between 1973 and 1981 inclusive, and possibly on other occasions. His main entomological interest was in weevils (especially the subfamilies Amycterinac and Cryptorhynchinae, but these were never studied owing to his death on 4 August 1981 at the age of 37).

Zenta Licpa, Canberra, obtained a paratype of the fly *Tephritis pumila* 5 km SE of Dorriggo on 24/6/1976.

D.J. Bickel made a general collection of insects in the subtropical rainforest at The Glade, Dorrigo National Park, on 25-27 January 1996, the specimens going to the Australian Museum.

(It is possible that some collectors have been overlooked.)

Incidentally, Chadwick (1970) stated that the scarab *Rhopaea verreauxi* Blanch. had been bred from pastures in the Dorrigo district where damage had occurred for upwards of 30 years.

NEW SPECIES COLLECTED BY WILLIAM HERON

The following abbreviations are used to indicate the taxonomic status of Arthropoda collected in the Dorrigo district by Wm. Heron.

H = Holotype. A = Allotype. At = Allotopotype. C = Cotype, P = Paratype. Pt = Paratopotype. T = Type. T(H) = unique specimen, therefore Holotype. In earlier descriptions Type (one word) is regarded as equivalent to Holotype in later publications.

INSECTA MANTODEA

RAWARENA paraoxypila Tindale 1930.T.A.

ORTHOPTERA GRYLLIDAE

ENDOCAUSTA oligoneura Chopard 1951. H

ORNEBIUS curtispis Chopard 1951. H.

O. laevicauda Chopard 1951.H

TETRIGIDAE

TETRIX dorrigoensis Rehn 1952. T(H).

HEMIPTERA CICADELLIDAE

CICADELLA heroni Evans 1938 (Syn. of *Kolla albomarginata* (Sign.))

ACHILIDAE

ANEIPO minerva Lambkin 1978. P.

LYGAEIDAE

SCOPIASTES impeditus Slater 1978. P. ?Unpublished.

COLEOPTERA

In some cases the description includes specimens collected by one or more collectors besides Heron, and no types were designated in the description. Where Heron was not the sole collector of a new species the notation WH et al is used.

HISTERIDAE

PLATYSOMA acicipunctum Lea 1924. T(H). WH et al.
P. multistriatum Lea 1924. T(H).

STAPHYLINIDAE

ANTIMERUS auricomus Lea 1925. H.

PSELAPHIDAE

PALIMBOLUS metasternalis Lea 1926. H.

LUCANIDAE

EUCARTERIA floralis Lea 1914. H. WH et al.
LAMPRIA imberbis Carter 1926. H.
RHYSSONOTUS costatus Carter 1929. H.

GEOTRUPIDAE

AUSTRALOBOLBUS austrinus Howden 1992. P. WH et al.

SCARABAEIDAE

Scarabaeinae

Described by E.G. Matthews, except *P. politus*.
AULACOPRIS maximus 1974. P
DIORYGOPYX niger 1974. 3P.
ONTHOPHAGUS kumbaingeri 1972. H.
O. nurubuan 1972. P
PANELUS politus Carter 1936. H.
THYREGIS relictus 1976. H, 3P.

Melolonthinae

COLYMBOMORPHA splendida Lea 1919. (Now *Nitorellus splendidus* (Lea). H, 2P.) WH et al.
PHYLLOTOCUS antennalis Lea 1919. (Now *Anthotocus antennalis* (Lea)) T(H).
PHYLLOTOCIDIUM bimaculiflavum Lea 1917. H 3P.

DASCILLIDAE

DASCILLUS oblongus Carter 1930. H.
ELODES variegata Carter 1935. ?T(H). WH et al.

BUPRESTIDAE

BUPRESTIS moesta (?) Carter 1915. T (Syn. of *Phospheres aurantiopicta* L & G.
CISSEIS heroni Carter 1934. H.
STIGMODERA oblita Carter 1931. H. A.

BYRRHIDAE

PEDILOPHORUS polychromus Lea 1920. H.

ELMIDAE (= "Dryopidae")

KINGOLUS heroni Carter & Zeck. 1929. H.
NOTRIOLUS dorrigoensis C & Z. 1929. H.P.
N. humeralis C & Z. 1929. ?T.P. WH et al.
N. minor C & Z. 1932. H.

PSEPHENIDAE

SCLEROCYPHON irregularis Carter. 1935. P. (Syn. of *S. maculatus* Blkb. 1892.

EUCNEMIDAE

ARISUS carinaticeps Lea 1916. T. WH et al.

FORNAX interruptus Lea 1916. T. WH et al.

F. suturalis Lea 1916. T. WH et al.

ELATERIDAE

GLYPHEUS cruciger Carter 1939. H.

CANTHARIDAE

HETEROMASTIX apicicornis Lea 1929. H.

H. longicornis Lea 1921. T. WH et al.

H. tibialis Lea 1921. T. WH et al.

TELEPHORUS atricornis Lea 1921. T. WH et al.

ANOBIIDAE

TRYPOPITYS pictipennis Lea 1924. H.

MELYRIDAE

DASYTES pictipes Lea 1921. H.

NITIDULIDAE

CIRCOPES vagans Lea 1921. T. WH et al.

CYCHRAMUS picticollis Lea 1921. T. WH et al.

PHALACRIDAE

LITOCRUS basipennis Lea 1932. T. WH et al.

EROTYLIDAE

EPISCAPHULA flavofasciata Lea 1921. T. WH et al.

THALLIS alternata Lea 1922. T. WH et al.

T. tricolor Lea 1922. T. WH et al.

CERYLONIDAE

EUXESTES medioniger Lea 1922. T. WH et al..

COLYDIIDAE

BITOMA cylindrata C & Z 1937. T. WH et al.

LARINOTUS umbilicatus C & Z 1937. H.

TENEBRIONIDAE

All descriptions by H.J. Carter except *L. pulchrivaria* Lea

ALCMEONIS paradoxus 1915. P.

BOLBOPHANES (?) pallidipes 1929. H.

CAMPOLINE nitidor 1937. H.

CHROMOMOEIA suturalis 1930. HA.

LAGRIA pulchrivaria Lea 1917. T. WH et al.

LEPISPILUS ocellaris 1932. H. P. WH et al.

LUCINOMA aerea 1920. H.

MENEPHILUS rectibasis 1914. T. WH et al.

PLATYDEMA heroni 1929. H.

OEDOMERIDAE

- PSEUDOLYCHUS canaliculatus* Lea 1917. H.
P. laticornis Lea 1926. T. WH et al.
P. megalops Lea 1926. H.

CERAMBYCIDAE

- CERAGIDION dorrigoensis* McKeown 1937. H.A.P
COPTOPTERUS scriptelytron McKeown 1940. H.
HOMEOMOTA tricolor Lea 1918. T. WH et al.
PORITHEA obliqua Lea 1916. T. WH et al.
SCLEROCANTHA cuneata McKeown 1938. H.
STENELLIPSIS spencei McKeown 1942. P.

CHRYSOMELIDAE

All species described by A.M. Lea.

- CANDEZA maculipennis* 1923. T. WH et al.
COLASPIDOIDES haemorrhoidalis 1915. T.WH et al.
C. heroni 1915. H.WH et al.
C. mimeta 1915. H.
EUDITROPIDIUS niger 1920. H.
EDUSA securigera 1915. T(H).
GRAMMICOMELA quadrilineata 1915. T. WH et al.
LAMPROLINA simplicipennis 1916. T. WH et al.
MONOLEPTA abaceta 1923. T.WH et al.
M. vittimedia 1923. T. WH et al.
POROPTEROMELA epipleuralis 1916. T. WH et al.
STETHOMELA rara 1916. T(H).
THALLIS alternata 1922. P. WH et al.
T. tricolor 1922. H. WH et al.
TRYPOCOLASPIS multicarinata 1915. T.WH et al.

BELIDAE

- BRACHYBELUS undulatus* Zimm.1994. 2P.

ATTELABIIDAE

- EUOPS coxalis* Lea 1929. H.

CURCULIONIDAE

All Curculionidae described by A.M.Lea.

- ACHOPERA microps* 1931. H.A.
AULETES laterirostris 1926. T WH et al.
CYLLORHAMPHUS mimicus 1914. T. WH et al.
EURYCHIRUS obtusatus 1929. T. WH et al.
GONIPTERUS intermedius 1927. H.
MANDALOTUS medcoxalis 1926. T.WH et al.
M. transversus 1914. H.
POROPTERUS cryptyodermus 1928. H.
RHINARIA carinirostris 1929. H.
STOREUS carinirostris 1927. H.
S. hoplocnemis 1927. H.

Of the 91 valid species of Coleoptera described from the district Heron collected 43 holotypes and paratypes of 46 other species. *Buprestes moesta* and *Sclerocyphon irregularis* are known synonyms.

DIPTERA

TIPULIDAE

Collected by William Heron; described by C.P. Alexander. Most of the types are in the Alexander Collection (now in the US Museum of Natural History), but some were borrowed and returned to the lending institution e.g., South Australian and Queensland Museums.

Dobrotworsky (1968-1974) revised the family more recently and Theischinger (1988-current) is at present working on the group and each has made changes in the nomenclature. However for present purposes the names used by Alexander have been retained.

- AMPHINEURUS spinitergatus* 1931. H.
CLYTOCOSMUS tillyardi 1920. H.
C. skusei 1922. T(H).
CRYPTOLABIS convoluta 1931. H.A.2P.
DOLICHOPEZA davidsoni 1930. A.P.
D. dorrigoensis 1930. H.
D. segnis 1937. H.
ERIOPTERA diplacantha 1931. P.
GYMNASTES clitellaria 1937. H. A. 3, 2 Pt.
GYNOPLISTIA albofasciata 1934. H.
G. guttulicostata 1934. H.P.
G. heroni 1929. H.
G. remulsa 1928. H..
G. shewani 1929 H. Pt.
HABROMASTIX heroni 1922 T(H).
LIMNOPHILA bathrogramma 1929. H. A. Pt.
L. defecta 1929. H.A.Pt.
L. dorrigana 1933. H.
L. lepida subtilis 1929. H.
L. microceroides 1933. H.
L. obscuripennis neptuna 1929. H.
L. tasioceroides 1933. H. A.
LIMONIA dorrigoensis 1930. H.
L. exosa 1930. H. 6Pt.
L. flavidella 1930. P.
L. whitei brevispinula 1933. H.
L. zelota 1933 H.
MACROMASTIX brevipetiolata 1922. T(H).
M. opifex 1929. H.
MOLOPHILUS aplecta 1929. H.
M. dorriganus 1934. H.
M., drepanostylus 1934. H.Pt.
M. eurygramma 1929. H.
M. exquisitus 1929. H.
M. fuscolineatus 1929. H.
M. fusiformis 1934. H.
M. heroni 1929. H.
M. opifex 1929. H.
M. opulus 1929. H.Pt.
M. pauperculus 1927. H.
M. poliocephalus 1927. H.
M. tersus 1931. H. A. 2Pt.
PARAGYMNASTES nigripes 1922. H. A.
P. niedeli 1931 A. Pt. 2P.
PHYMATOPSIS albidipes 1929. H. At.3Pt.
P. nigrolimbata 1929. H.
PLATYPHASIA regina 1922. H.At.3Pt.

PLUSIOMYIA neogama 1944. H.
PLATYMOPSIS albidipes 1929. H. At. 3Pt.
P. brevirostrata 1922. T(H). A.
P. nigrolimbata 1929. H.
RHABDOMASTIX generosa 1922. T(H).
TASIOCERA acanthophyllus 1931. H.
T. bipennata 1928. H. At. A. 3Pt.
T. dorrigoensis 1928. H.
T. primaverais 1928. H.

These data indicate that of 56 species of Tipulidae described from the Dorrigo area by Alexander, Heron collected the holotypes of 52 species and the paratypes of four species. There is no record of the number of species already described (i.e. pre-Heron).

Localities from which specimens/species were collected were Brooklana 29, Dorrigo 19, Eastern Dorrigo 11 and Ulong five. (It is not clear what is included in Eastern Dorrigo, as both Ulong and Brooklana are some distance from the town Dorrigo and much closer to each other. Ulong is north east of Brooklana).

Months when collections were made and the number of species/specimens collected were: January 10, February 10, March 5, April 6, May 4, June 2, July 0, August 2, September 2, October 7, November 11 and December 6, i.e. the months October to February were the most productive, as might be expected.

Heron's first collection of Tipulidae was in April 1917 when he captured *Clytocosmus tillyardi*, the last was *Gynoplusia guttulicosta* taken on 23 February 1933, a period of 16 years. Alexander described Dorrigo insects between 1920 and 1944.

Considering that Heron collected Tipulidae over a long period he probably overlooked few, if any, species in the area. However since Heron was an active collector the district environment would have changed a great deal. A comparison of the Tipulid fauna of the present day would no doubt yield interesting results.

TANYDERIDAE

RHADINOMERUS dorrigoensis Alex. 1930. H.

PSYCHODIDAE

NEMOPALPUS australiansis Alex. 1928. H.

TACHINIDAE

RUTILIA hirticeps Malloch 1929. P.

R. nigriceps Malloch 1929. T(H). 3P.

TRICHOPTERA

PSYCHOMYIIDAE

STENOPSYCHODES melanochrysa Tillyard 1922. H.P.

HYMENOPTERA

PERGIDAE

ACANTHOPERGA marlati Benson 1939. H.

TIPHIIDAE

PENTAZELEBORIA janeta Brown 1983. 2P.

COLLETIDAE

CLADOCERAPIS heroni Rayment 1935. H.

ARACHNIDA
ARANEAE
DIPLURIDAE

AUSTRALOTHELE *nambucca* Raven 1984. 2P.

SUMMARY OF TYPES COLLECTED BY W. HERON

INSECTA	Holotypes	Paratypes
MANTODEA	1	0
ORTHOPTERA	4	0
HEMIPTERA	0	1
COLEOPTERA	91	46
DIPTERA		
Tipulidae	52	4
Tanyderidae	1	0
Psychodidae	1	0
TRICHOPTERA	1	0
HYMENOPTERA	2	1
ARACHNIDA	0	1
	153	53

Heron thus made a contribution of more than 200 species of previously unidentified arthropods to the described fauna of the Dorrigo plateau.

Valid species bearing the name *heroni* include four beetles belonging to the genera *Cisseis*, *Kingolus*, *Platydemia*, *Colaspoides*; three flies *Gynoplistia*, *Habromastix* and *Molophilus*; and one bee *Cladocera*.

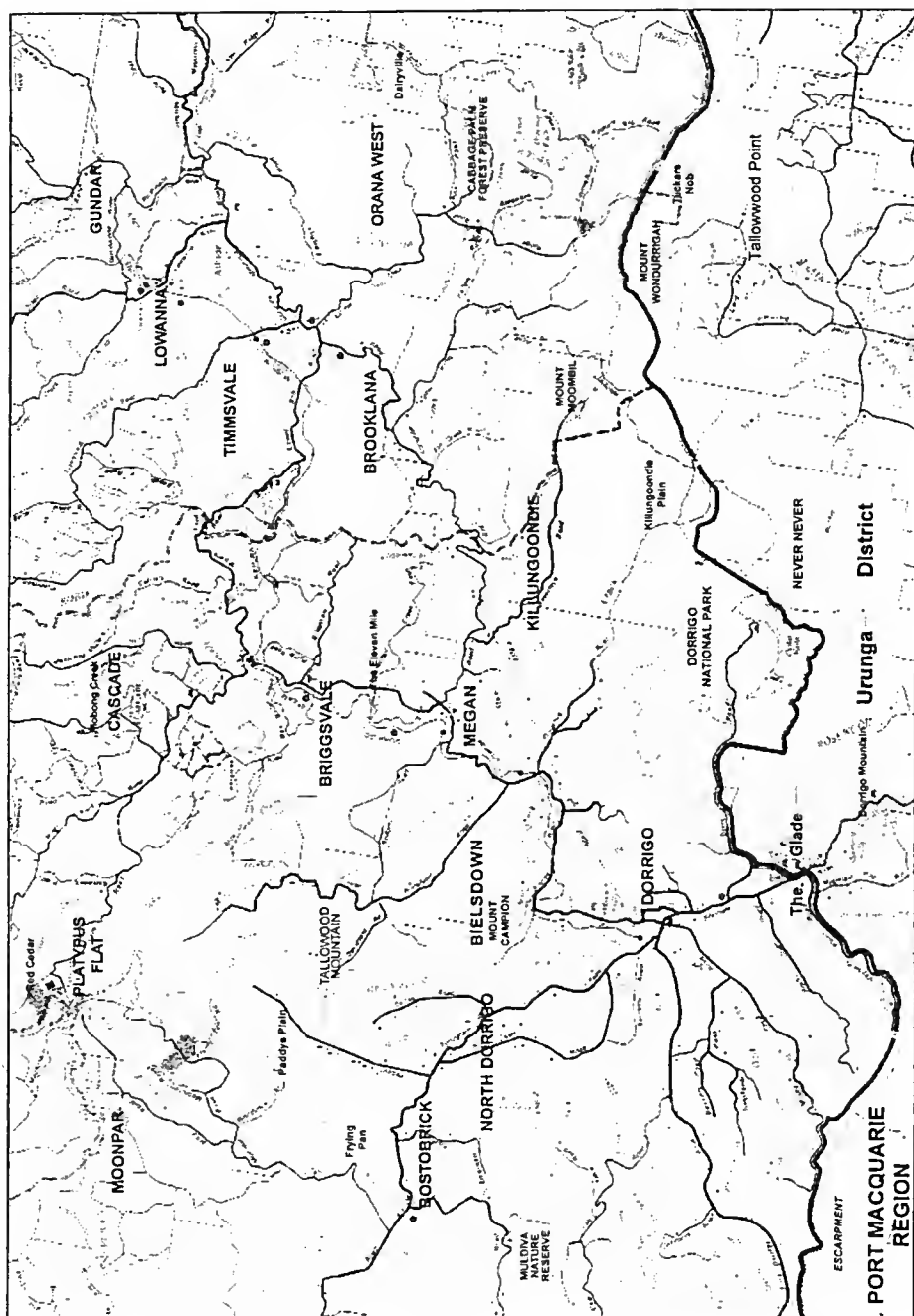
ACKNOWLEDGEMENTS

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REFERENCES

- ALEXANDER, C.P. (1920). An Undescribed Species of *Clytocosmus* Skuse (Tipulidae: Diptera). *Proc. Linn. Soc. NSW.* 45(1), 183-184.
- ALEXANDER, C.P. (1928). Crane-flies (Tipulidae, Diptera) from Barrington Tops, New South Wales. *Proc. Linn. Soc. NSW.* 53(2), 51-70.
- ALEXANDER, C.P. (1932). A Review of the Tipulidae of Australia (Diptera). *Proc. Linn. Soc. NSW.* 57(1-2), 1-23.
- ALEXANDER, C.P. (1934). Notes on the Australian Species of *Molophilus* (Tipulidae, Diptera). II. *Proc. Linn. Soc. NSW.* 59(3-4), 179-189.
- BRITTON, E.B. (1957). *A Revision of the Australian Chafer (Coleoptera: Scarabaeidae: Melolonthinae)*. Trustees of the British Museum. London.
- BROWN, G.R. (1983). *Pentazeleboria*. A New Genus of Australian Thynnini (Hymenoptera: Tiphidae). *J. Aust. ent. Soc.* 22(1), 61-64.
- CARTER, H.J. (1911). Tenebrionidae from Dorrigo. *Proc. Linn. Soc. NSW.* 35(4), 843-848.

- CARTER, H.J. (1914). Revision of the Subfamily Tenebrioninae, Family Tenebrionidae. (Australian Species, with Descriptions of New Species of Tenebrioninae and Cyphaleinae). *Proc. Linn. Soc. NSW.* **39**(1), 44-86.
- CARTER, H.J. (1932). New Guinea and Australian Coleoptera. Notes and New Species. No. 2. *Proc. Linn. Soc. NSW.* **57**(3-4), 101-115.
- CARTER, H.J. (1933). *Gulliver in the Bush*. Angus & Robertson. Sydney.
- CARTER, H.J. & ZECK, E.H. (1929). A Monograph of the Australian Dryopidae. Order Coleoptera. *Aust. Zool.*, **6**(1), 50-72.
- CARTER, H.J. & ZECK, E.H. (1932). Four New Species of Dryopidae together with Notes on the Family (Order Coleoptera). *Aust. Zool.* **7**(3), 202-205.
- CARTER, H.J. & ZECK, E.H. (1937). A Monograph of the Australian Colydiidae. *Proc. Linn. Soc. NSW.* **62**(3-4), 181-208.
- CHADWICK, C.E. (1970). Some Aspects of the Life History and Ecology of *Rhopaea magnicornis* Blkb. (Col., Scarabaeidae). *Proc. Linn. Soc. NSW* **95**(1), 11-21.
- EVANS, J.W. (1938). Australian Leaf-hoppers (Homoptera: Jassioidea). Part VII. *Pap. Proc. R. Soc. Tasm.* **1938**, 1-18.
- EVANS, J.W. (1966). *The Leafhoppers and Froghoppers of Australia and New Zealand*. Australian Museum Memoir **12**, 1-347.
- LAMBKIN, K.J. (1978). The Australian Genera *Aneipo* Kirkaldy and *Bubduica* Jacobi (Homoptera: Fulgoroidea: Achilidae). *J. Aust. ent. Soc.*, **17**(1), 25-40.
- LEA, A.M. (1914). Notes on Some Miscellaneous Coleoptera with Descriptions of New Species. *Trans. R. Soc. S. Aust.* **38**, 249-344.
- MALLOCH, J.R. (1929). Notes on Australian Diptera. No. XX. *Proc. Linn. Soc. NSW.*, **54**(4), 283-343.
- MATTHEWS, E.G. (1972, 1976). A Revision of the Scarabaeine Dung Beetles of Australia. I, III. *Aust. J. Zool. Supp. Ser.*, **9**, 1-300; **38**, 1-52.
- RAVEN, R.J. (1984). Systematics of the Australian Curtain-web Spiders (Ischnothelina: Dipluridae: Chelicerata). *Aust. J. Zool. Supp. Ser.* **93**: 1-102.
- REHN, J.A.G. (1952). *The Grasshoppers and Locusts of Australia*. Vol. 1. CSIRO Melbourne.
- SLOANE, T.G. (1911). Carabidae from Dorrigo, NSW. *Proc. Linn. Soc. NSW.*, **35**(4), 823-843.
- WATERHOUSE, G.A. (1914). A Monograph of the Genus *Tisiphone* Hubner. *Aust. Zool.*, **1**(1), 1-5.
- WATERHOUSE, G.A. (1915). Further Notes on the Genus *Tisiphone* Hubner. *Aust. Zool.* **1**(2), 50-51.
- WATERHOUSE, G.A. (1922). Presidential Address. An Account of Some Breeding Experiments with the Satyrine Genus *Tisiphone*. *Proc. Linn. Soc. NSW.*, **47**(1), ix-xvii.
- WATERHOUSE, G.A. (1928). A Second Monograph on the Genus *Tisiphone*. *Aust. Zool.* **5**(3), 217-240.
- ZIMMERMAN, E.C. (1994). *Australian Weevils*. Vol. 1. CSIRO & Entomological Society of America. Melbourne.



RECENT ARTICLES OF INTEREST

Compiled by Ian Faithfull

Nicki Borchard, **Locust fear growing**. *Weekly Times* 30 Aug. 2000, p.9; Catherine Sudholz, **Locusts prompt worst-case alert**. *WT* 6 Sep. p. 20; **Spray's seed of hope**. *WT* 6 Sep. p.20; Simon Dalton, **\$1 m to fight locusts. Mallee braces itself for a plague**. *WT* 20 Sep.; Genevieve Barlow, **Fungal assault on locust plague**, *WT* 4 Oct. p.20; C.Sudholz, **Bare facts on locusts**, *WT* 11 Oct., p.13; S.Dalton, **Mallee on full locust alert**, *WT* 11 Oct., p. 13; N.Borchard, **Locust hatchings in Mallee set to peak**, *WT* 18 Oct., p.12; Fiona Myers, **Farmers go to war**, *WT* 18 Oct., p.12; **Locusts sprayed in north**, *WT* 25 Oct., p.4; David McKenzie, **Locust weapon on the way**, *WT* 1 Nov., p.11; S.Dalton, **Rain revives plague threat**, *WT* 1 Nov., p.11; F.Myers, **Locust fight moves into Riverina**, *WT* 8 Nov., p.12; S.Dalton, **Locust threat on the wing**. *WT* 22 Nov., p.24; F.Myers, **Case of the missing locusts**, *WT* 6 Dec., p.13; Stephen Cauchi, **Locust attack Wimmera crops**, *The Age* 14 Dec., p.2; Peter Hemphill, **Locust strike a success**, *WT* 20 Dec., p.11. After minor plagues in 1999 though to autumn 2000, the season was shaping up as extremely threatening, with major outbreaks predicted in WA, W Qld, NSW, Vic and NE SA, because of suitable summer and autumn conditions and good spring rains, ideal for breeding. Swarms arrived in NW Vic on late April dust storms and large numbers of eggs were laid. The last major plague in the grain belt had been in 1984 and caused \$5 m damage, and this time the Wimmera and Mallee were facing the worst plague since 1992 (August prediction), or potentially the worst in history (20 Sep.). The Australian Plague Locust Commission (APLC) planned to establish 18 campaign sites in regional centres to coordinate aerial spraying. In late Sep. the Vic. government pledged \$1 m for strategic spraying and the first spraying in W NSW commenced. The main pesticides to be used were fibronil and the organophosphate fenitrothion. Enough of the new fungal insecticide *Metarhizium anisopliae*, specific to orthopterans, was available to treat 30,000 ha in "environmentally sensitive" areas, said the APLC in early October, but the fungus would take 7 to 15 days to kill. The large scale application "trials" would be "an important element in the registration process" for the new product, to be known as "Greenguard", said CSIRO's Dr Richard Milner. A South Australian farmer who treated his seed wheat with neem (a traditional south Asian plant extract) found that locusts avoided the offensive smelling treated area, as did kangaroos. It was argued that the cause of the locust problem, bare ground on which eggs are deposited, was not being addressed, and that chemical spraying would help breed a chemically resistant strain. A stable litter layer in pastures and arable lands could provide a long term solution. Swarming had started in the Broken Hill and Wilcannia areas by early October with lower levels hatchings in southern NSW. About 100 farmers attended information meetings in the Mallee in the first week of October, with further meetings planned, as the first reports of hatchings were made in the Millewa and Walpeup districts and warnings were issued of swarms entering Vic from the north. By mid Oct., warm, dry conditions N of Broken Hill had broken up bands of young hoppers, making them difficult to locate and spray. 37 bands infesting about 379 sq km had been sprayed with "7969 litres" of fenitrothion, the APLC said. DNRE aerial spraying commenced on 20 Oct. on 280 ha of wheat and barley, 85 km W of Mildura. Cool weather and lack of locust food in Victoria had dampened fears. By 1 November dry conditions had killed many hoppers in W NSW and further rains and cool weather had disrupted spraying in Vic., but extensive aerial spraying had been undertaken in S NSW by 8 Nov. The campaign was said to "have kept what could have been a major disaster under control". The NSW Riverina was the new focus of attention. By 22 Nov. reports from Mildura were of a build up of adult numbers to 1 locust per square metre in some streets. About 116,000 ha had been sprayed in SA and 2000 ha in Vic. By 6 Dec. the "good news" was that a 50 km x 10 km band of 500,000 locusts had mysteriously disappeared, possibly into a national park or into SA, and there were only small, scattered outbreaks in Vic. But there were further warnings that big rains in SW Qld and NW

NSW could lead to continuing problems. By 14 December the largest swarm to hit Vic., "between a billion and a trillion" locusts, at densities up to 100 per square m, had ruined lucerne crops and were occupying 1500 square km (also given as 60,000 ha) in the W Wimmera, S of the Big Desert. The "battle" against this swarm was "won" with five APLC aircraft which sprayed 15,000 ha in a week. There the matter rests for the time being.

Fiona Myers, **Fruit fly battle costs soar**, *Weekly Times* 1 Nov. 2000 p.84; F.Myers, **All-out war on fruit fly**, *WT* 3 Jan 2001; Nikki Borchard, **Fly areas begin disinfection**, *WT*, 17 Jan. p.10; N.Borchard, **Growers on fruit fly alert**, *WT* 31 Jan. p.63; F.Myers, **Fruit fly fight steps up**, *WT* 21 Mar. p.79; F.Myers, **Fruit fly control costs paying off**, *WT* 28 Mar. p.21. The authorities are unable to prevent costly outbreaks of Queensland fruit fly in Victorian and S NSW fruit-growing areas. The NSW government spent \$3 m in a baiting campaign and growers ca. \$1 m to protect navel oranges in the autumn-spring 2000 period in the Riverina. Suitable weather and an AQIS ruling that growers were no longer allowed to conduct preventative baiting had "conspired to create the outbreaks". Spring releases of sterile flies had helped in control. Another outbreak was reported in the Riverina in early January. The NSW Government established a team of 12 specialists at Yanco to re-establish fly-free status in the region. 5 flies were trapped at Narrung NW of Swan Hill in early Jan. resulting in loss of fruit-fly-free status for the area for the first time in about 30 years and requiring costly treatments. A further two outbreaks, on back yards trees at Kerang and Bendigo, had occurred in Vic by the end of Jan., forcing thousands of growers to disinfect fruit before market. A cost-benefit analysis of control measures (showing a 5:1 benefit cost ratio) was to be discussed at two meetings in March by which time 177 people had been fined \$200 each for carrying fruit into protected areas. The problem is to be discussed by the Steering Committee for Agricultural Resource Management in August.

Paul Sellars, **Research bid aims to KO phylloxera**, *Weekly Times* 11 October 2000, p.117. Two new DNRE projects to study early detection methods, alternative management strategies and new chemical management techniques for the grapevine root aphid pest. Australia is one of the few countries whose major vineyard areas are not infested, although outbreaks have occurred in recent years in NE Vic. Early detection research would focus on molecular markers in the vines.

Pheromones now overtaking insecticides, *Acres Australia* 8(9), October 2000, p. 2. 90% of Australian commercial stonefruit growers now use pheromone mating disruption techniques to control pest moths, according to CSIRO's Richard Vickers.

Caroline Ovington, **Web of intrigue attracts a plague**, *The Age* 22 January 2001. 100 or 120 glossy mouse spiders caught in a back yard in suburban Newcastle, NSW. After rain "hundreds, perhaps thousands ... moved in ... the neighbours have not been affected".

Msibov, R. 2000. An overview of the Tasmanian millipede fauna. *Tasmanian Naturalist* 122, 15-28.

Neyland, M. and Bell, P., 2000. Ecology and conservation of the chaostola skipper butterfly (*Antipodia chaostola leucophaea*) in Tasmania. *Tas. Nat.* 122, 47-54.

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DIARY OF COMING EVENTS

Friday 15 June

Peter Williams will present a talk on "Locust Control Campaign 2000"

Thursday 19 July Council Meeting

Friday 17 August

Alena Glaister will present a talk on "Aquatic insects"

Thursday 20 September Council Meeting

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions may be refereed, and authors alone are responsible for the views expressed.

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